

**REMARKS**

Claims 21-40 are pending. By this Amendment, claims 21-40 are amended. Support for the amendments to claims 21 and 30 can be found at in the specification at, for example, paragraphs [0018]-[0020] and [0030]. Claims 21-40 are amended for form. No new matter is added.

Claims 21, 22, 27-31 and 36-40 are rejected under 35 U.S.C. §§102(e) and (b) as being anticipated by Kustermann (U.S. Patent No. 6,248,174 B1). These rejections are respectfully traversed.

Kustermann does not teach or suggest the features of independent claims 21 and 30. For example, Kustermann does not teach or suggest measuring a composition of the coating to be transferred to the paper web by determining at least one of an amount of one or more components and a ratio of two or more components, as recited in independent claim 21 (emphasis added). Further, Kustermann does not teach or suggest a first measuring device arranged to measure at least one of an amount of at least one component in the coating and a ratio of two or more components on the paper web by reflection measurement, as recited in independent claim 30 (emphasis added).

Kustermann merely relates to determining the amount of coating for a paper web based on the measurement of flow quantity signals of coating applied to a material web, either directly or indirectly. For example, Kustermann discloses an application mechanism 12 that applies a liquid or pasty coating medium 14 onto a material web 18 (Kustermann, col. 3, line 66 - col. 4, line 4, and Fig. 1). A control unit 42 controls actuators 40 so that they give information about the flow quantity of the layer applied onto the material web 18 (Kustermann, col. 4, lines 32-43). Kustermann discloses first and second measuring frames 44 and 46 that prepare flow quantity signals G1 and G2. G1 is based on the properties/characteristics of the uncoated material web 18, and G2 is based on the

properties/characteristics of the coated material 18. The control unit 42 determines the flow quantity properties of the applied coating-layer 14a onto the material web 18 by the differential signal  $\Delta G$  (Kustermann, col. 4, lines 53-67). Kustermann thus measures the uncoated material web 18 to determine the flow quantity properties. Therefore, Kusterman does not disclose measuring the amount of at least one component in the coating on the paper web and measuring the composition of the coating to be transferred to the paper web, as recited in the independent claims.

Further, at col. 5, lines 36-59, Kustermann discloses that the flow quantity of the applied layer 14a can be determined indirectly by use of two current meters 62 and 64, which may be volume flow metering measuring devices (62 and 64) or mass current or mass flow metering devices (62' and 64'). The signals from either devices are forwarded to a differential formation link or comparator 68, which supplies a different signal  $\Delta G'$  to the control unit 42. The differential signal  $\Delta G'$  provides information about the coating medium emitted through the outlet gap 36 onto the material web 17. The control unit 42 merely determines from the differential signal  $\Delta G'$  the flow quantity of the coating layer 14a by consulting further sensor signals, for example, via the running traveling speed of the material web 18 or the solid substance content of the coating medium in the coating medium supply 30 determined by the coating medium sensor 52 (Kustermann, col. 5, lines 1-14). Kustermann thus discloses measuring the flow quantity of the coating layer by merely combining the information of the differential signal  $\Delta G'$  and the solid substance content of the coating medium, as obtained by sensor 52. In other words, Kustermann merely measures the total amount of flow of the coating applied to the material web 18. Therefore, Kustermann does not disclose measuring the amount of at least one component in the coating on the paper web and the ratio of two or more components in the coating to be transferred to the paper web, as recited in the independent claims.

Thus, Kustermann does not teach or suggest measuring a composition of a coating to be transferred to the paper web by determining the composition of the coating and determining an amount of the coating on the paper web on a basis of the amount of the at least one component of the coating on the paper web and the composition of the coating to be transferred to the paper web, as recited in independent claims 21 and 30.

Therefore, for at least these reasons, independent claims 21 and 30 are patentable over Kustermann. Further, claims 22, 27-29, 31 and 36-40, which various depend from claims 21 and 30, are patentable over Kustermann for at least the reasons discussed above, as well as for the additional features they recite. Withdrawal of the rejections is thus respectfully requested.

Claims 39 and 40 are rejected under 35 U.S.C. §103(a) as being obvious over Kustermann; claims 23-25, 28, 32-34 and 37 are rejected under 35 U.S.C. §103(a) as being obvious over Kustermann in view of Belotserkovsky (U.S. Patent No. 6,183,561 B1); and claims 21-24, 26-34 and 36-40 are rejected under 35 U.S.C. §103(a) as being obvious over Belotserkovsky in view of Kustermann. These rejections are respectfully traversed.

These claims depend from independent claims 21 and 30, which are now believed to be patentable over Kustermann. Moreover, the Office Action admits on page 8 that "Belotserkovsky does not disclose measuring the *composition* of the coating to be transferred to the paper web," (emphasis in original) and thus does not overcome the deficiencies of Kustermann. Therefore, claims 21-25, 26-34 and 36-40 are patentable over Kustermann and Belotserkovsky for at least the reasons discussed above, with respect to claims 21 and 30, as well as for the additional features they recite. Withdrawal of the rejections is respectfully requested.

Claims 26 and 35 are rejected under 35 U.S.C. §103(a) over Kustermann, in view of Belotserkovsky, in further view of Workman, Jr. (U.S. Patent No. 6,452,679 B1). The rejection is respectfully traversed.

These claims depend from independent claims 21 and 30, which are now believed to be patentable over Kustermann and Belotserkovsky. Further, Workman does not remedy the deficiencies of Kustermann and Belotserkovsky. Workman is only cited by the Office Action for its alleged teaching of infrared and Raman spectroscopy techniques. Therefore, claims 26 and 35 are also patentable over Kustermann, Belotserkovsky and Workman for at least the reasons discussed above with respect to claims 21 and 30, as well as for the additional features they recite. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Petition for Extension of Time

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